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(54) Spread spectrum receiver having despreaders commonly shared among rake combiners

(57) A spread spectrum receiver includes multiple despreaders (11₁-11_K) and multiple RAKE combiners (13₁-13_M) associated respectively with spread spectrum signals. Allocation circuitry (12₁-12_M, 15₁-15_M, 16-19) detects one or more multipath components of received spread spectrum signals respectively addressed to multiple users, and configures the despreaders into a number of groups of despreaders such that the groups correspond to the received spread spectrum signals and each group has one or more despreaders corresponding to the detected one or more multipath components of the received spread spectrum signal, and allocates the despreaders of each group to the corresponding RAKE combiner. All despreaders are provided in number that is smaller than the number of the RAKE combiners times a maximum number of possible multipath components of a spread spectrum signal and greater than the number of the RAKE combiners.

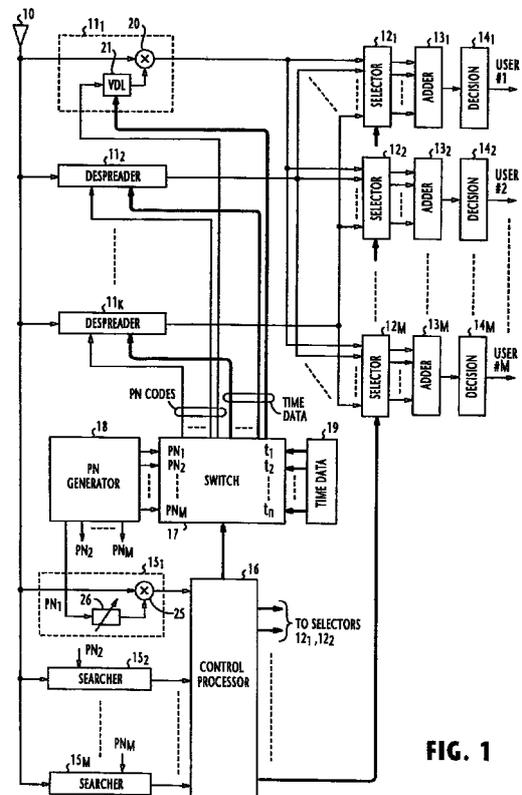


FIG. 1



European Patent Office

PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 00 10 2621

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 794 623 A (YRP MOBILE TELECOMMUNICATIONS ; SONY CORP (JP)) 10 September 1997 (1997-09-10) * abstract; claims 1-6,10; figures 1-3,6,8 * * column 2, line 40 - line 46 * * column 3, line 29 - line 53 * * column 4, line 13 - line 33 * * column 5, line 5 - line 24 * * column 8, line 7 - line 17 * * column 11, line 34 - line 50 *	1-5,7	H04B1/707
X	US 5 684 793 A (JOLMA PETRI ET AL) 4 November 1997 (1997-11-04) * abstract; claims 1-3; figure 2 * * column 2, line 55 - column 3, line 15 * * column 3, line 37 - column 4, line 7 * * column 4, line 16 - line 23 * * column 4, line 56 - line 63 *	1-4,6,7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H04B

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims

- Claims searched completely
- Claims searched incompletely .
- Claims not searched

Reason for the limitation of the search
see sheet C

Place of search	Date of completion of the search	Examiner
THE HAGUE	14 November 2000	Amadei, D

CATEGORY OF CITED DOCUMENTS

- X : particularly relevant if taken alone
- Y : particularly relevant if combined with another document of the same category
- A : technological background
- O : non-written disclosure
- P : intermediate document

- T : theory or principle underlying the invention
- E : earlier patent document, but published on, or after the filing date
- D : document cited in the application
- L : document cited for other reasons
- & : member of the same patent family, corresponding document

EPO FORM 1503 03 82 (P04C07)



Claim(s) searched completely:

2-6

Claim(s) searched incompletely:

1,7

Reason for the limitation of the search:

Present claims 1 and 7 relate to, respectively, an apparatus and a method defined (inter alia) by reference to the following parameter(s):

P1: maximum number of possible multipath components of a spread spectrum signal

The use of this parameter in the present context is considered to lead to a lack of clarity within the meaning of Article 84 EPC. It is impossible to compare the parameter the applicant has chosen to employ with what is set out in the prior art. The lack of clarity is such as to render a meaningful complete search impossible. Consequently, the search has been carried out without taking into account the technical feature for the description of which parameter P1 had been used, i.e. from line 11 to line 14 of claim 1 and from line 4 ("...said plurality") to line 8 ("of said RAKE combiners,") of claim 7.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 10 2621

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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14-11-2000

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82